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Inverted Sino Nasal Papilloma with Severe Dysplasia: A Case Report.

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ABSTRACT

Inverted Sino nasal papilloma (Schneiderian or Transitional cell papilloma) is a benign epithelial neoplasm which is locally aggressive with high recurrence rate and potential for malignant transformation. The chances of dysplastic changes and malignancy increases with duration and number of recurrences. Histopathological examination of the excised tissue in toto, plays an important role in diagnosing foci of carcinoma in a nasal mass which appears clinically benign. We hereby report a case of an otherwise typical inverted papilloma with severe dysplasia and possible malignant transformation at the time of first excision.

Keywords: Inverted papilloma, Recurrence, Dysplasia, Malignancy

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Case Report

A 48 year old male presented with complaints of right nose block since 2 years which was progressive and persistent since 2 months. It was associated with thick muco purulent discharge and itching. He is a chronic smoker since 15 years.

His general physical examination and vital signs were normal.

Direct Nasal Endoscopy revealed an irregular pinkish mass completely obstructing the right nasal cavity. The mass was firm in consistency and bleeds on touch.

CT scan of the nose and paranasal sinuses revealed a soft tissue density filling the right maxillary sinus, right ethmoid sinus and right choana extending into nasopharynx with partial deficiency of inferior aspect of mid portion of septum and medial wall of right maxillary sinus.

A provisional diagnosis of sino nasal polyposis/ inverted papilloma/ neoplastic lesion was made.

Patient underwent endoscopic guided biopsy and the tissue was sent for histopathological examination.

Gross

Multiple grayish white soft tissue bits in aggregate measuring 1cm was received.

Microscopy

Multiple sections studied showed fragments of a cellular neoplasm covered by non-keratinising stratified squamous epithelium and respiratory epithelium overlying down growths, islands and sheets of squamous epithelium with dysplastic changes, tumor giant cells and mitotic figures. Focal areas of necrosis and tiny nests of tumor cells infiltrating the stroma were also seen.

With the above microscopic picture, it was diagnosed as Inverted Sino nasal papilloma with severe dysplasia and possible malignant transformation.

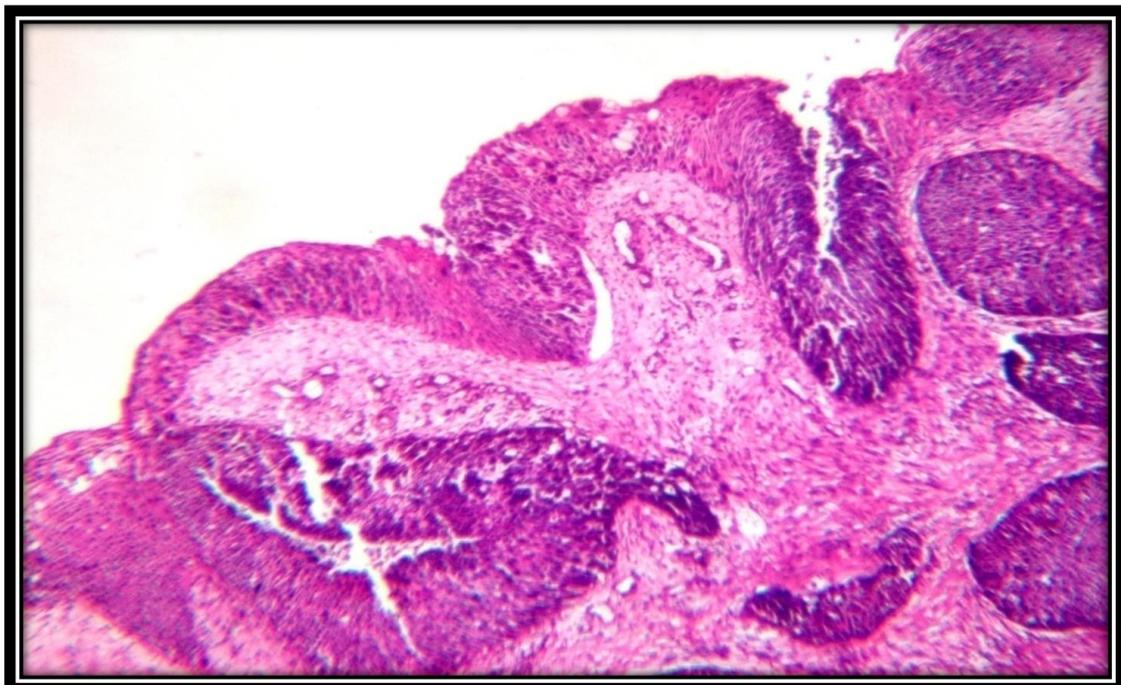


Figure1: 10X view: section shows down growths and islands of squamous and respiratory epithelium

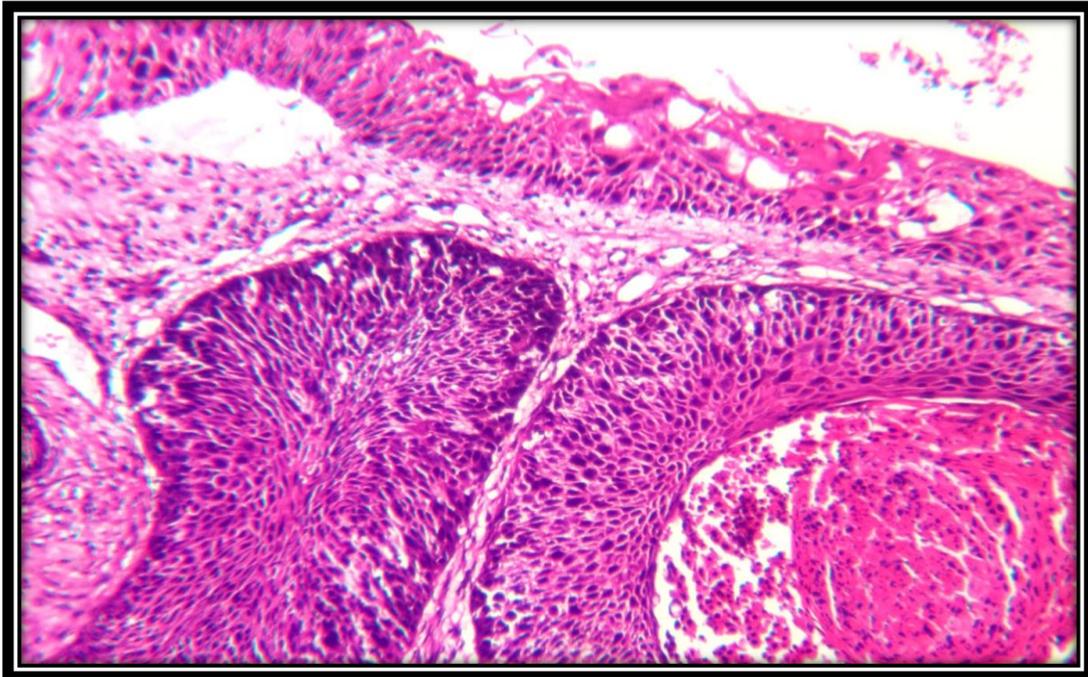


Figure 2: 40Xview: Squamous epithelium with severe dysplastic changes and areas of necrosis

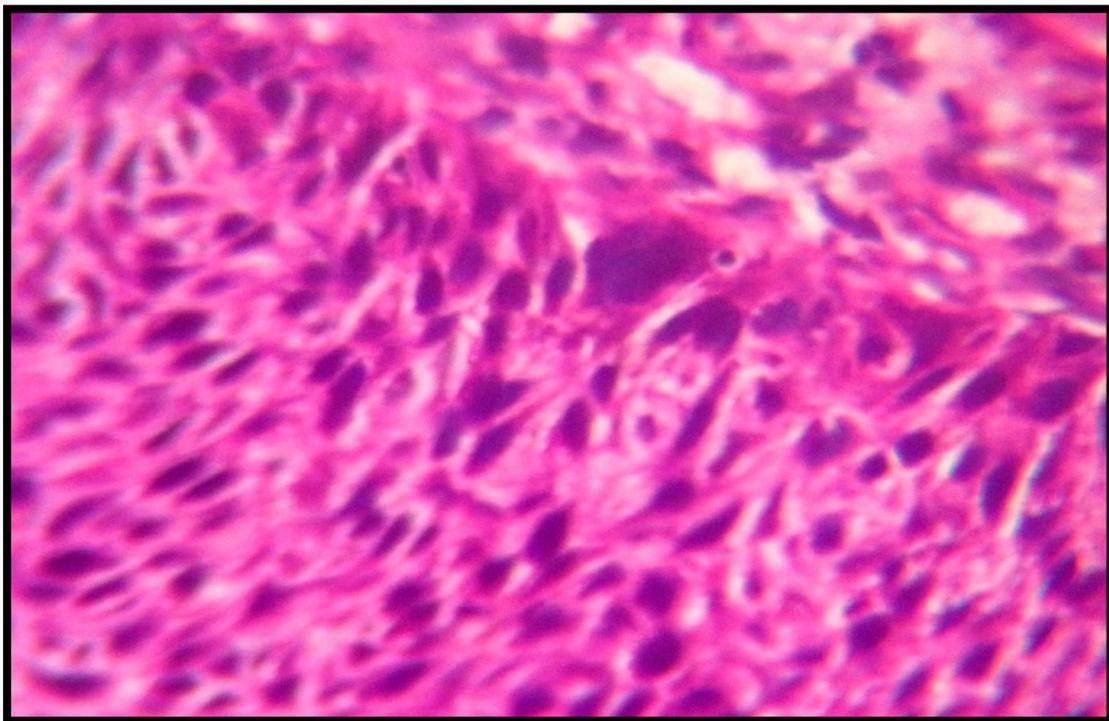


Figure 3: 40X view: Tumor giant cells

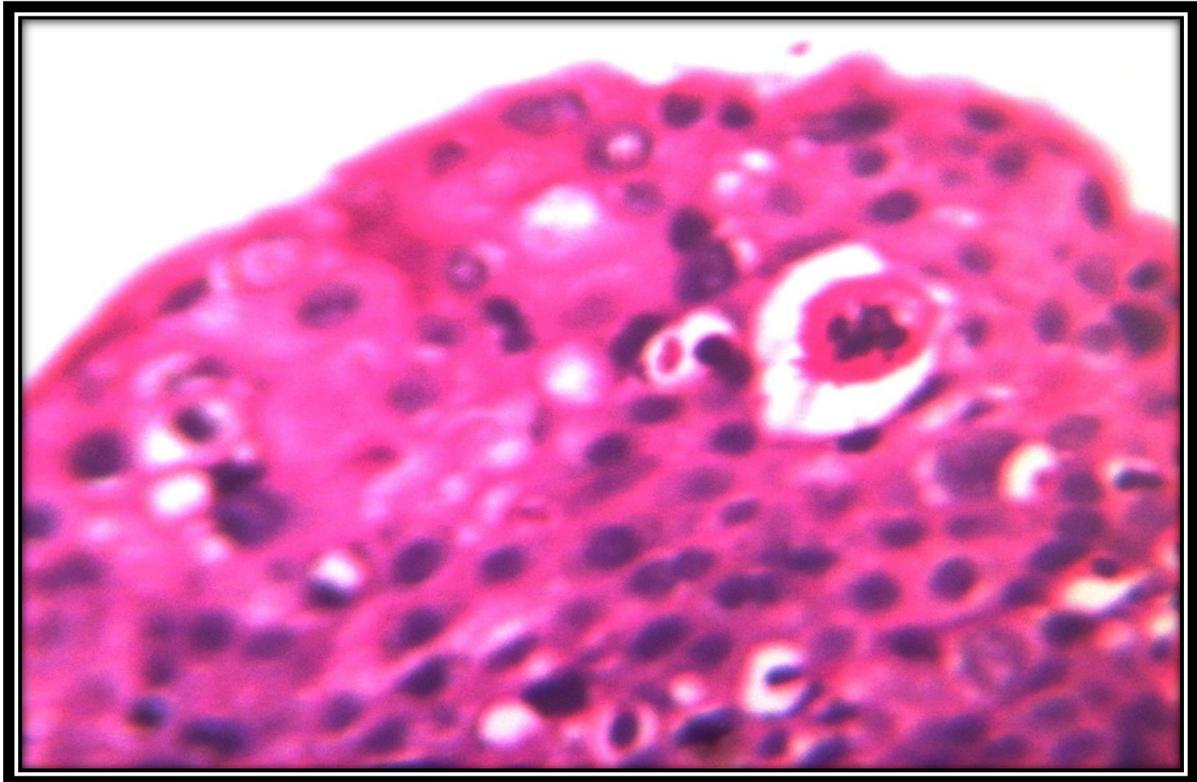


Figure 4: 40X view: Presence of mitotic figures

DISCUSSION

Inverted papilloma is a benign epithelial neoplasm composed of well differentiated columnar/ciliated respiratory epithelium with varying degrees of squamous differentiation [1]. They arise from the Schneiderian membrane that lines the nasal cavity and PNS [1]. It accounts for 0.5%-4% of all primary nasal tumors with a high predilection in males in 5th -7th decades of life. It is most commonly a unilateral lesion arising from the lateral nasal wall and maxillary sinuses [2].

Allergy, chronic rhino sinusitis, environmental agents and tobacco smoking[3] are considered to be the etiological factors of inverted papilloma.

Recent studies have shown that secondary infection with Human Papilloma Virus (HPV) 6/11 and 16/18 can lead to the progression of inverted papilloma to dysplasia and malignancy[4],[5]. Loss of tumor suppressor genes and/or a combination of both the factors can also lead to severe dysplastic changes in a long standing inverted papilloma [6, 5]. Incomplete resection at the site of origin can lead to multiple recurrences, which by itself is a risk factor for development of dysplasia [10]. In our case report, dysplasia was seen in the papilloma at the time of first excision.

Recent literature reveals that, incidence of dysplasia in inverted papilloma is 1%-2% and that of frank squamous cell carcinoma is 6%-53% [6, 7]. It can also progress to Transitional cell carcinoma, Muco epidermoid cell carcinoma, Adeno carcinoma and Verrucous carcinoma [7].

Microscopically, dysplastic inverted papillomas show marked atypia of squamous epithelium with loss of polarity, high N:C ratio, atypical mitosis and lack of eosinophils [8, 9]. These features are considered as negative prognostic markers [8].

The treatment of choice is radical excision of the papilloma at the site of tumor which reduces the risk of recurrence [1,3,5,10].



CONCLUSION

Inverted papilloma is a locally aggressive neoplasm with high recurrence rate and malignant potential. This case report stresses the importance of histopathological examination of the entire specimen in identifying any small foci of carcinoma in an otherwise typical inverted papilloma.

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